IN THE DRAWINGS

The attached sheets of drawings include changes to Figs. 3 and 5. These sheets, which include Figs. 3 and 5, respectively, replace the original sheets including Figs. 3 and 5, respectively. In Fig. 3, the word "pilot" (an input to block 320) has been put into concatenated form, as suggested by the Examiner. In Fig. 5, in block 524, the word "decoder" has been put into concatenated form, as suggested by the Examiner. Applicant thanks the Examiner for the helpful suggestions.

Attachment: Replacement Sheets
Annotated Sheets Showing Changes

REMARKS

Introduction:

Claims 5-6 and 8-14 are pending in the present application.

In the above amendments, claims 5-6, 8, 10, and 13-14 have been amended and claims 1-4, 7, and 12 have been canceled without prejudice. In claims 5-6, the word "operative" has been changed to "configured" to better clarify the scope of the invention and not to distinguish over the prior art of record.

In the Office Action mailed 4/19/2005, the Examiner objected to the drawings and specification, rejected claims 1-3, 5-7, 10-13 under 35 U.S.C.§103(a) as being unpatentable over Paulraj et al., US Patent 6351499 ("Paulraj") in view of Van Nee, US Patent 6175550 ("Van Nee") and further in view of Olofsson et al., US Patent 6167031 ("Olofsson"), and rejected claim 14 under 35 USC 103(a) as being unpatentable over Paulraj, Van Nee, and Olofsson and further in view of Cimini et al., US Patent 5914933 ("Cimini").

In addition, the Examiner indicated that claims 4, 8-9 recited allowable subject matter which is gratefully acknowledged by the Applicant.

Drawings

Applicant submits that the above noted amendments to the drawings do not make any substantive changes or introduce any new material but are simply the correction of typographical errors, which are consistent with the specification as originally submitted and with the Examiner's helpful suggestions. Therefore, approval and entry of the above amendments are respectfully requested.

Specification

Applicant provides herewith amendments to the specification and in particular, replaces the incorrect application numbers with the correct application numbers as noted in the Office Action. The amendments to the specification are made by presenting marked up replacement paragraphs which identify changes made relative to the immediate prior version.

The changes made are primarily typographical or grammatical in nature, or involve minor clarifications of awkward wordings.

Applicant believes these changes add no new matter to the application and are fully supported by the original disclosure.

Claim Rejections – 35 USC 103:

In the Office Action, the Examiner rejected claims 1-3, 5-7, 10-13 under 35 U.S.C.§103(a) as being unpatentable over Paulraj et al., US Patent 6351499 ("Paulraj") in view of Van Nee, US Patent 6175550 ("Van Nee") and further in view of Olofsson et al., US Patent 6167031 ("Olofsson"), and rejected claim 14 under 35 USC 103(a) as being unpatentable over Paulraj, Van Nee, and Olofsson and further in view of Cimini et al., US Patent 5914933 ("Cimini"). The rejections, as they relate to the pending claims, are respectfully traversed for the following reasons.

With reference to independent claims 5, 10, 13, and 14, the prior art of record including Paulraj, Van Nee, Olofsson, and Cimini does not teach nor suggest certain claimed features.

In particular, with reference to independent claim 5, the prior art of record including Paulraj, Van Nee, Olofsson, and Cimini does not teach nor suggest the claimed feature "derive a metric **for an equivalent channel**" and "a metric adjuster operative to adjust the metric **for the equivalent channel** using a predetermined back-off factor" (emphasis added) as set forth in lines 6-7 and 10-11, respectively.

Similarly, with reference to independent claim 10, the prior art of record including Paulraj, Van Nee, Olofsson, and Cimini does not teach nor suggest the claimed feature "deriving a metric **for an equivalent channel** based on a set of parameters and the one or more estimated channel characteristics" and "adjusting the metric **for the equivalent channel** to form an adjusted metric, wherein adjusting is done according to a back-off factor" (emphasis added) as set forth in lines 4-5 and 6-7, respectively.

Similarly, with reference to independent claim 13, the prior art of record including Paulraj, Van Nee, Olofsson, and Cimini does not teach nor suggest the claimed feature "means for deriving a metric **for an equivalent channel** based on a set of parameters and the one or

more estimated channel characteristics" and "means for adjusting the metric **for the equivalent channel** to form an adjusted metric, wherein adjusting is done according to a back-off factor" (emphasis added) as set forth in lines 5-6 and 7-8, respectively.

Similarly, with reference to independent claim 14, the prior art of record including Paulraj, Van Nee, Olofsson, and Cimini does not teach nor suggest the claimed feature "a second set of instructions for deriving a metric **for an equivalent channel** based on a set of parameters and the one or more estimated channel characteristics" and "a third set of instructions for adjusting the metric **for the equivalent channel** to form an adjusted metric, wherein adjusting is done according to a back-off factor" (emphasis added) as set forth in lines 6-7 and 8-9, respectively.

According to the Examiner, Paulraj teaches the use of training unit 70 to establish equivalent channel characteristics, see page 5, lines 4-5, of the Office Action. However, it is respectfully submitted that Paulraj does not teach using the training unit 70 to establish equivalent channel characteristics. Instead, Paulraj teaches that the training unit 70 is used to transmit training data which can be sent in a separate control channel or together with data 52, see col. 9, lines 14-21. A matrix channel estimator 84 estimates the channel coefficients using known training patterns, e.g., the training patterns provided by training unit 70, see col. 9, lines 32-35 of Paulraj. Hence, Paulraj teaches using the training unit 70 in conjunction with matrix channel estimator 84 to establish channel characteristics for the communication channel being used by the system and not for the **equivalent channel** as claimed.

As recognized by the Examiner, Paulraj does not teach, inter alia, adjusting the metric. The Examiner relies upon Olofsson to cure this deficiency of Paulraj and states that Olofsson teaches adjusting the metric and references step 103 of Fig. 10 of Olofsson in support thereof. However, it is respectfully submitted that Olofsson and in particular, step 103 of Fig. 10, does not teach the claimed feature of "adjusting the metric for the equivalent channel" but rather, at most, teaches calculating a metric in the form of Popt(i).

Allowable Subject Matter:

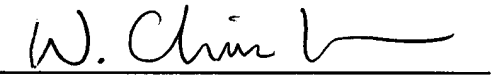
In response to the indication of allowable subject matter, claim 8 has been placed in independent form and therefore should be allowable along with dependent claim 9.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

Dated: August 19, 2005

By: 

Won Tae Chris Kim, Reg. No. 40,457
(858) 651-6295

QUALCOMM Incorporated
5775 Morehouse Drive
San Diego, California 92121
Telephone: (858) 658-5787
Facsimile: (858) 658-2502

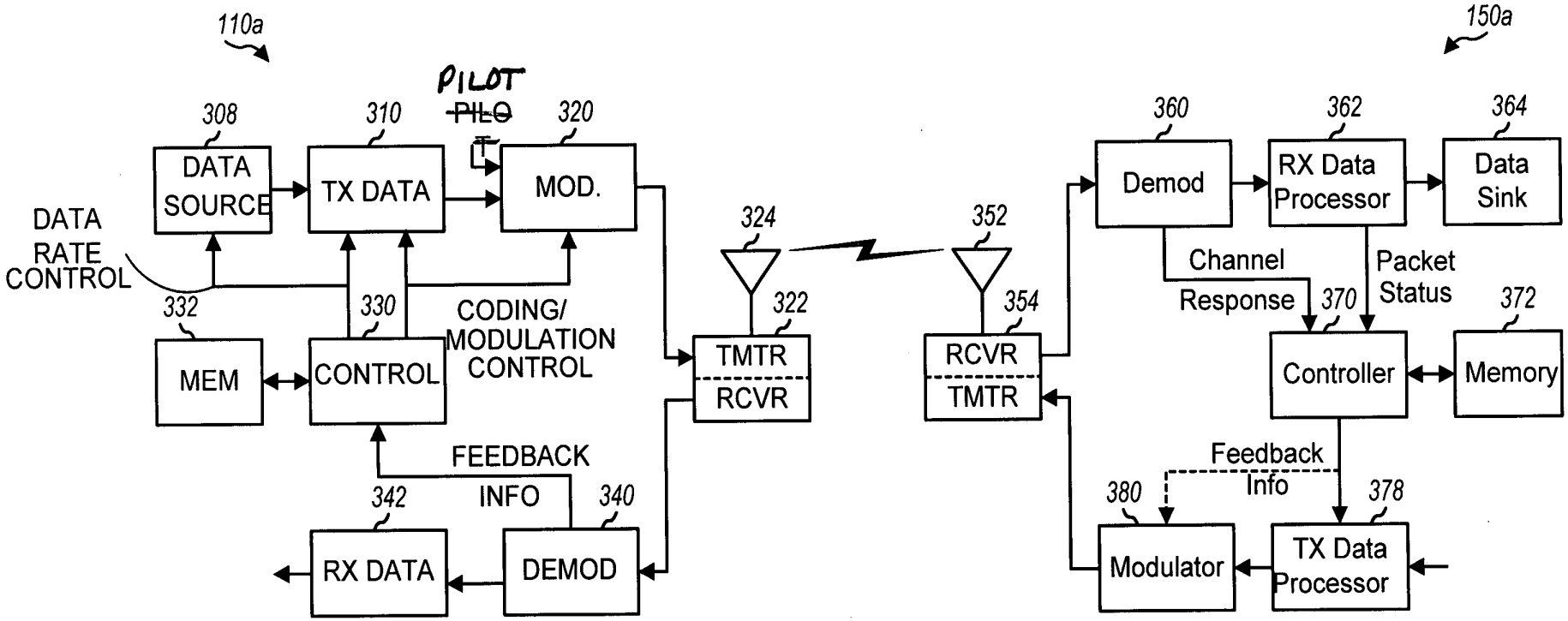
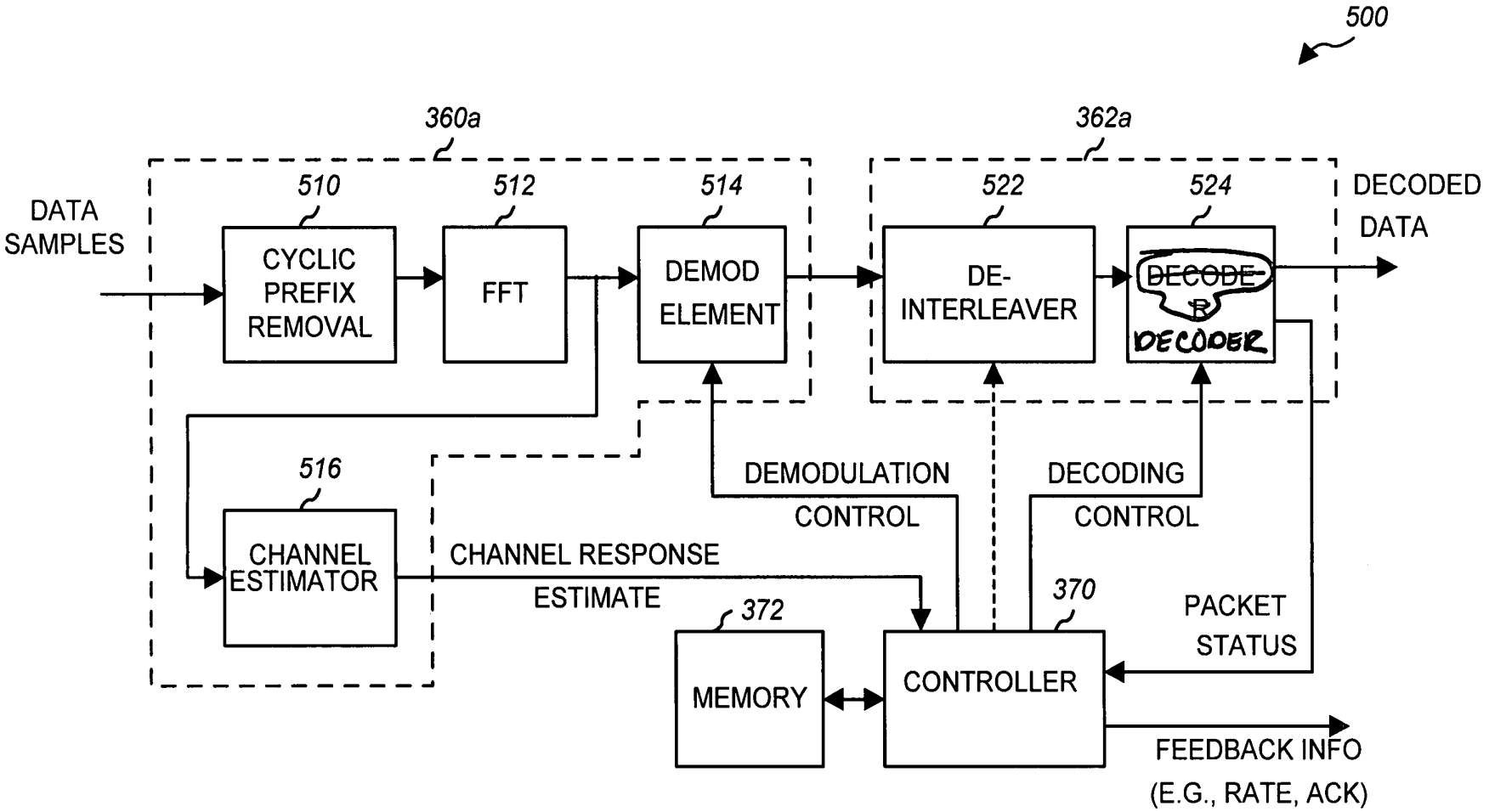


FIG. 3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DATA SAMPLES
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CYCLIC PREFIX REMOVAL
512
FFT
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DEMOD ELEMENT
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DE-INTERLEAVER
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DECODE-R
DECODER
DECODED DATA
516
CHANNEL ESTIMATOR
DEMODULATION CONTROL
DECODING CONTROL
CHANNEL RESPONSE ESTIMATE
372
MEMORY
370
CONTROLLER
PACKET STATUS
FEEDBACK INFO
(E.G., RATE, ACK)

FIG. 5